Michigan Educational Assessment Program

Mathematics Grade 6
Scoring Guide for
Released Item #47
Mixed Nuts
Fall 2005

MICHIGAN Department of Education

(4 Points)

Mary mixes $\frac{1}{2}$ pound of walnuts with $\frac{1}{4}$ pound of pecans and $\frac{1}{8}$ pound of pistachios.

A Write a mathematical expression that gives the weight of the mixed nuts.

B Using your expression from part A, calculate the total weight of the mixed nuts.

ANSWER THIS ITEM IN YOUR ANSWER FOLDER.

SHOW ALL YOUR WORK IN YOUR ANSWER FOLDER.

Mathematics Rubric for Mixed Nuts

Sample Response:

1/2 +1/4+1/8 = 7/8 pounds

Scoring Rubric:

- **2 points** for a correct mathematical expression (1/2+1/4+1/8, decimal equivalent, or combination of equivalent values).
- **1 point** for the correct answer (7/8 or fraction equivalent, decimal equivalent, or 14 ounces).
- **1 point** for correct units (pounds).

A **4-point** response includes all four points.

A **3-point** response includes three points.

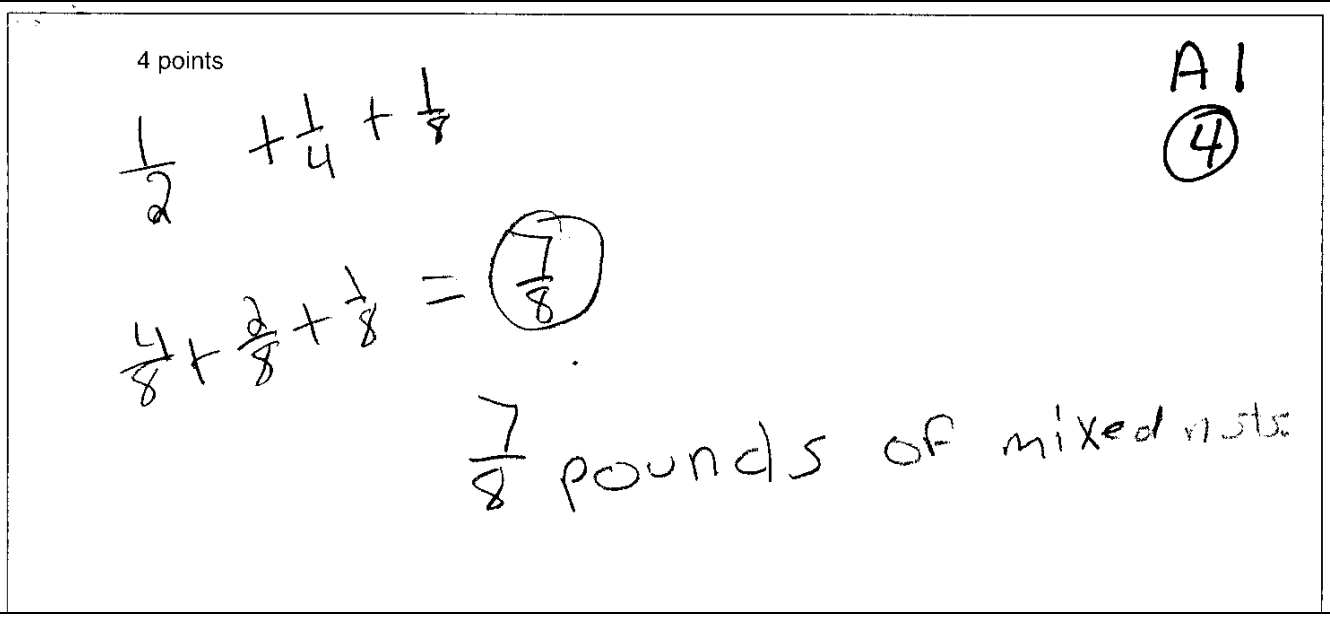
A **2-point** response includes two points.

A **1-point** response includes one point.

A **0-point** response shows insufficient understanding of the item being tested.

Condition codes for unratable papers (zeroes):
A – Off Topic
B – Written in a Language other than English or Illegible
C – Blank or Refusal to Respond

Sample Paper 1 – Score Point 4



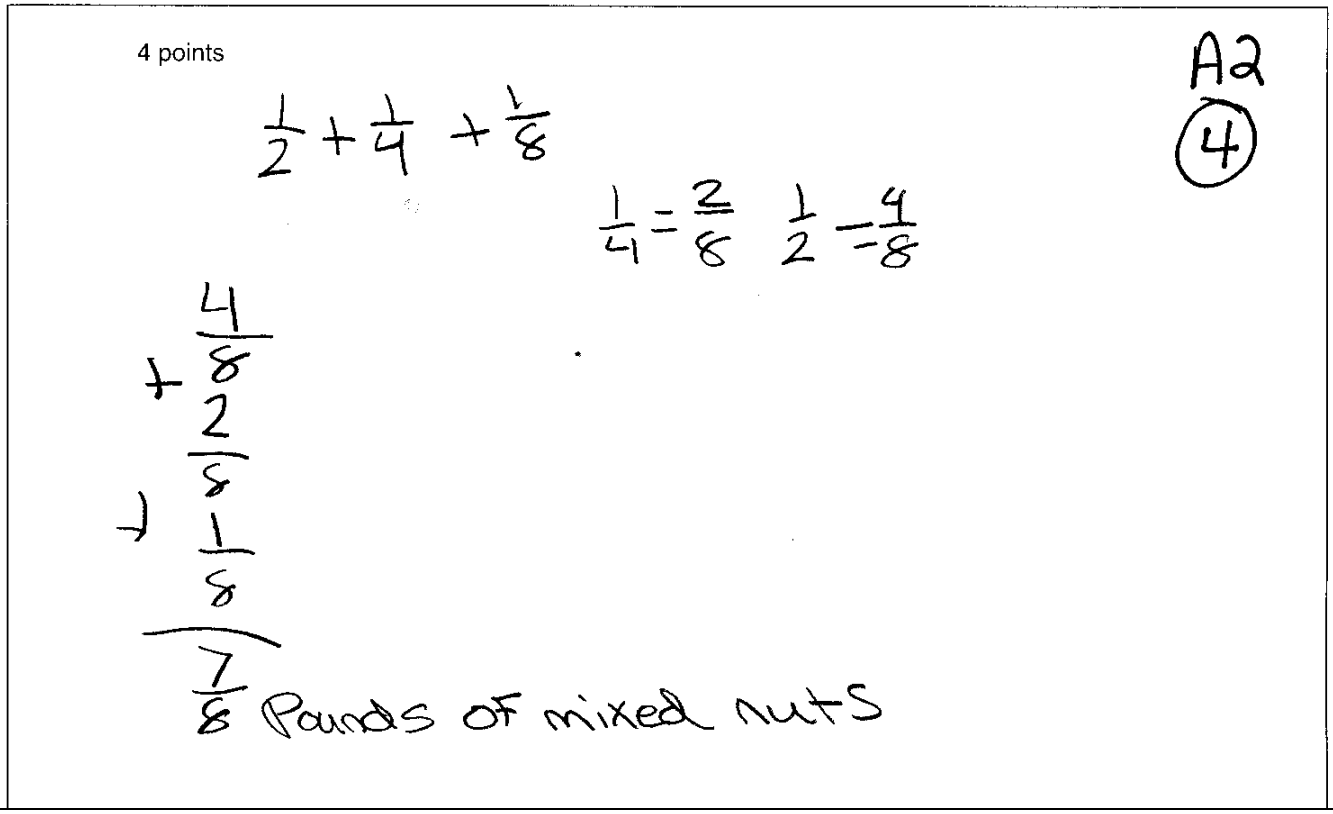
Sample Paper 1
Score Point 4

The response demonstrates complete understanding of the task by providing a correct expression, weight and label.

- The response has a correctly constructed mathematical expression (*1/2 + 1/4 + 1/8*). **(2 points)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response has the correct unit of weight (*pound*). **(1 point)**

The response earns **4 points.**

Sample Paper 2 – Score Point 4



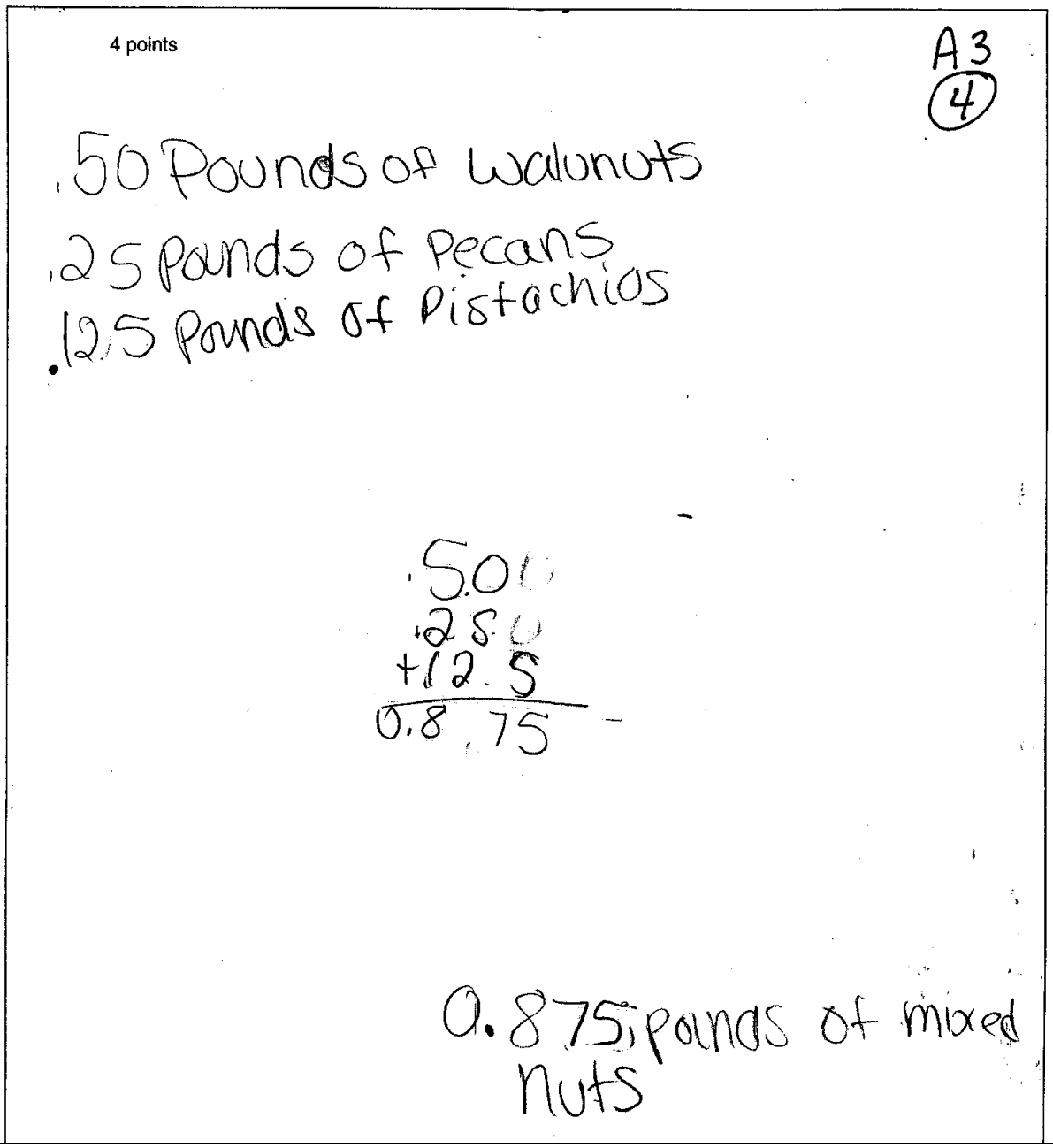
Sample Paper 2
Score Point 4

The response demonstrates complete understanding of the task by providing a correct expression, weight and label.

- The response has a correctly constructed mathematical expression (*1/2* + *1/4* + *1/8*). The expression is written both horizontally and vertically. If written vertically as a math fact, the plus sign (+) must be used, and if the answer is included, a line must separate the addends and the sum to indicate an equality. **(2 points)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response has the correct unit of weight (*pounds*). **(1 point)**

The response earns **4 points.**

Sample Paper 3 – Score Point 4



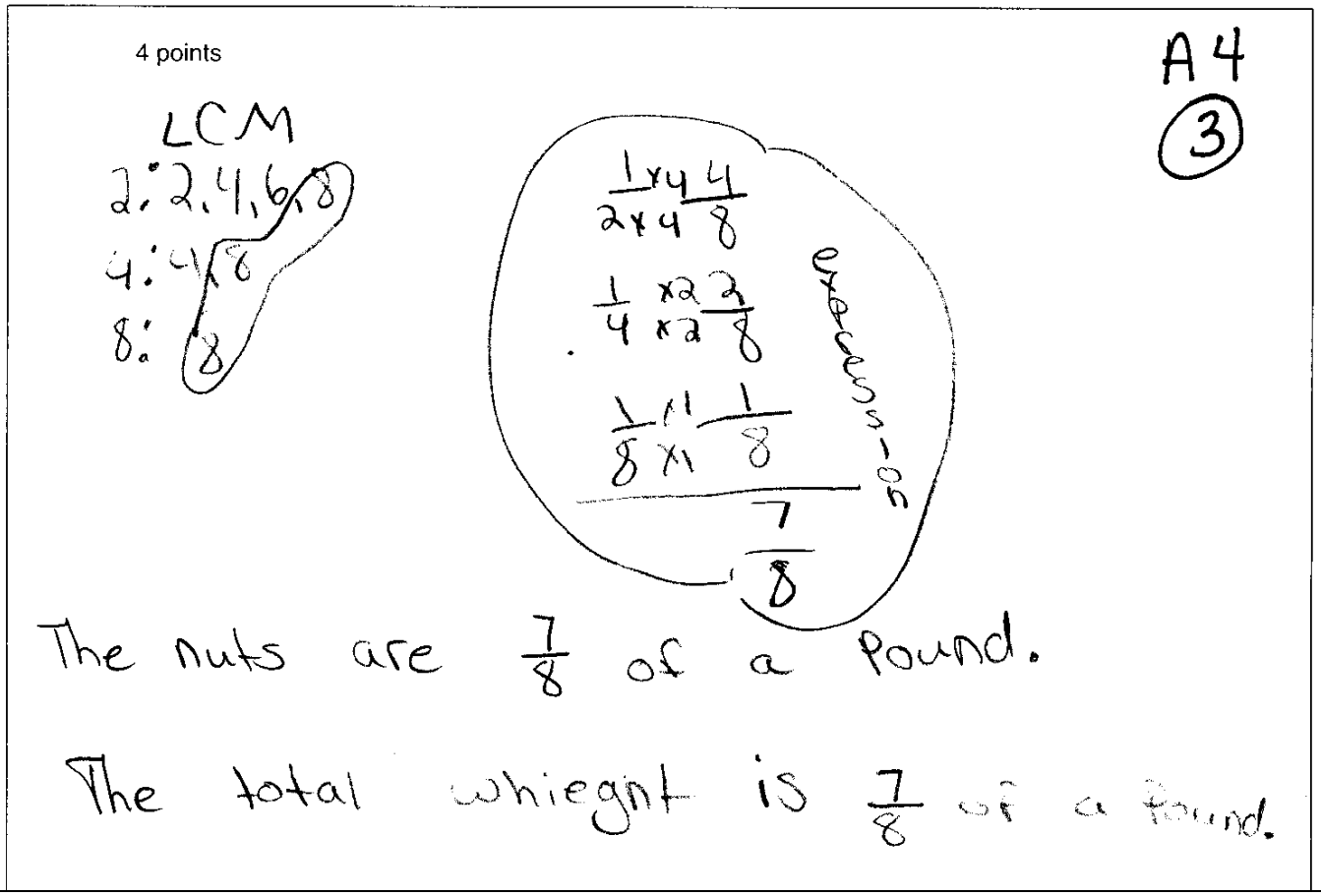
Sample Paper 3
Score Point 4

The response demonstrates complete understanding of the task by providing a correct expression, weight and label.

- The response has a correctly constructed mathematical expression written vertically. The pounds of nuts are expressed correctly as decimal equivalents *(.50, .25, .125)*. If written vertically as a math fact, the plus sign (+) must be used, and if the answer is included, a line must separate the addends and the sum to indicate an equality. **(2 points)**
- The response has the correct weight of the mixed nuts *(0.875)*. **(1 point)**
- The response has the correct unit of weight *(pounds)*. **(1 point)**

The response earns **4 points.**

Sample Paper 4 – Score Point 3



Sample Paper 4
Score Point 3

The response demonstrates understanding of the task by providing a partially correct expression, weight and label.

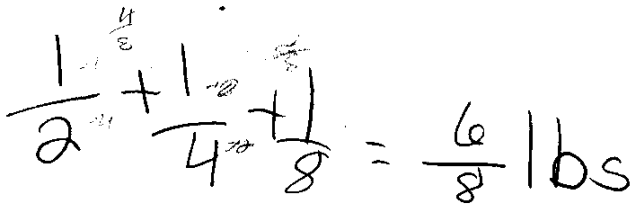
- The response has a partially correct mathematical expression using the given fractions correctly changed to fractions with the common denominator of 8 (*4/8, 2/8, 1/8*). The expression, written vertically, does not have a plus sign and is therefore partially correct. **(1 point)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response has the correct unit of weight (*pounds*). **(1 point)**

The response earns **3 points.**

Sample Paper 5 – Score Point 3

4 points

A5
(3)



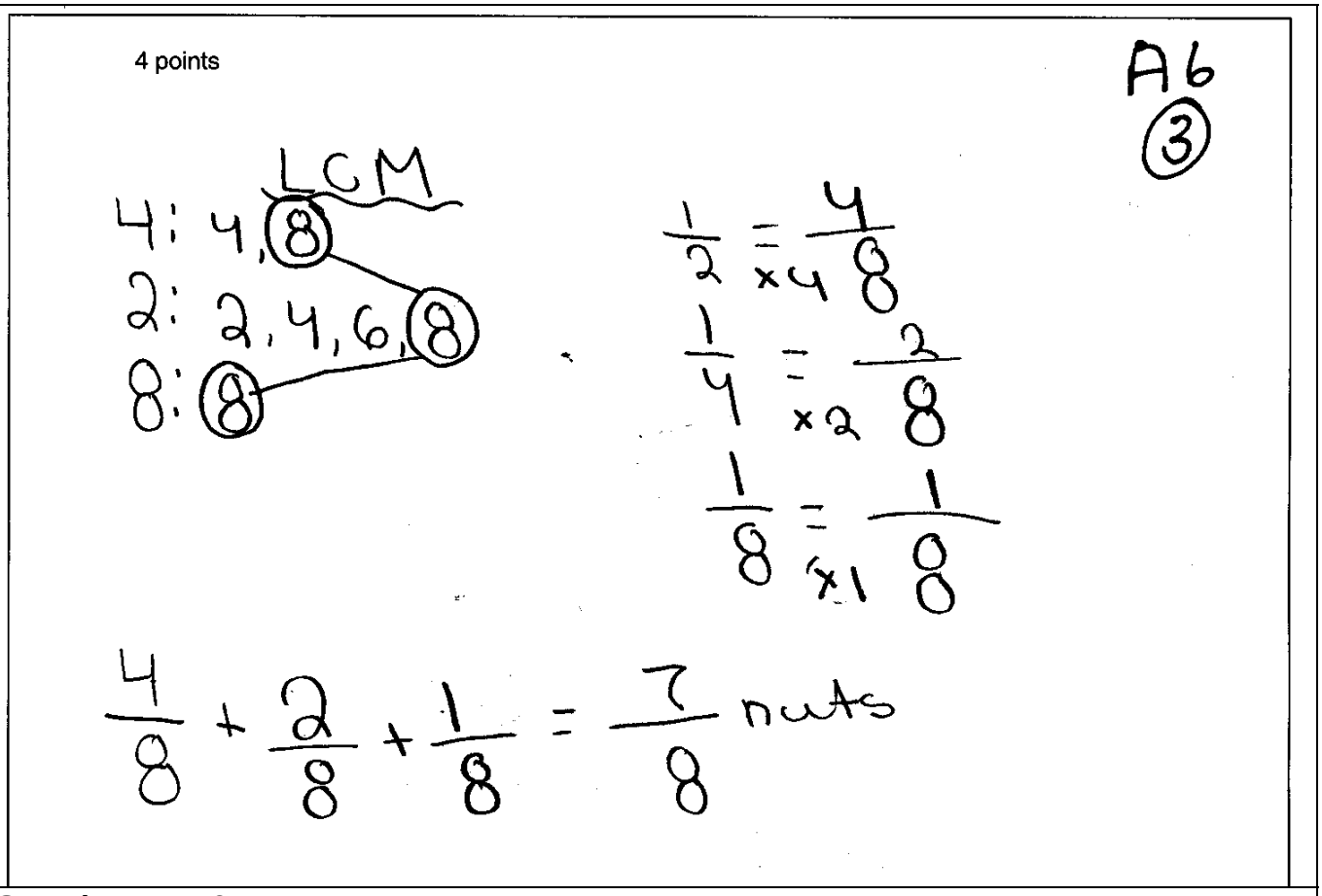
Sample Paper 5
Score Point 3

The response demonstrates understanding of the task by providing a correct expression and label.

- The response has a correctly constructed mathematical expression (*1/2* + *1/4* + *1/8*). **(2 points)**
- The response has an incorrect weight of mixed nuts (*6/8*). **(0 points)**
- The response has the correct unit of weight (*lbs*). **(1 point)**

The response earns **3 points.**

Sample Paper 6 – Score Point 3



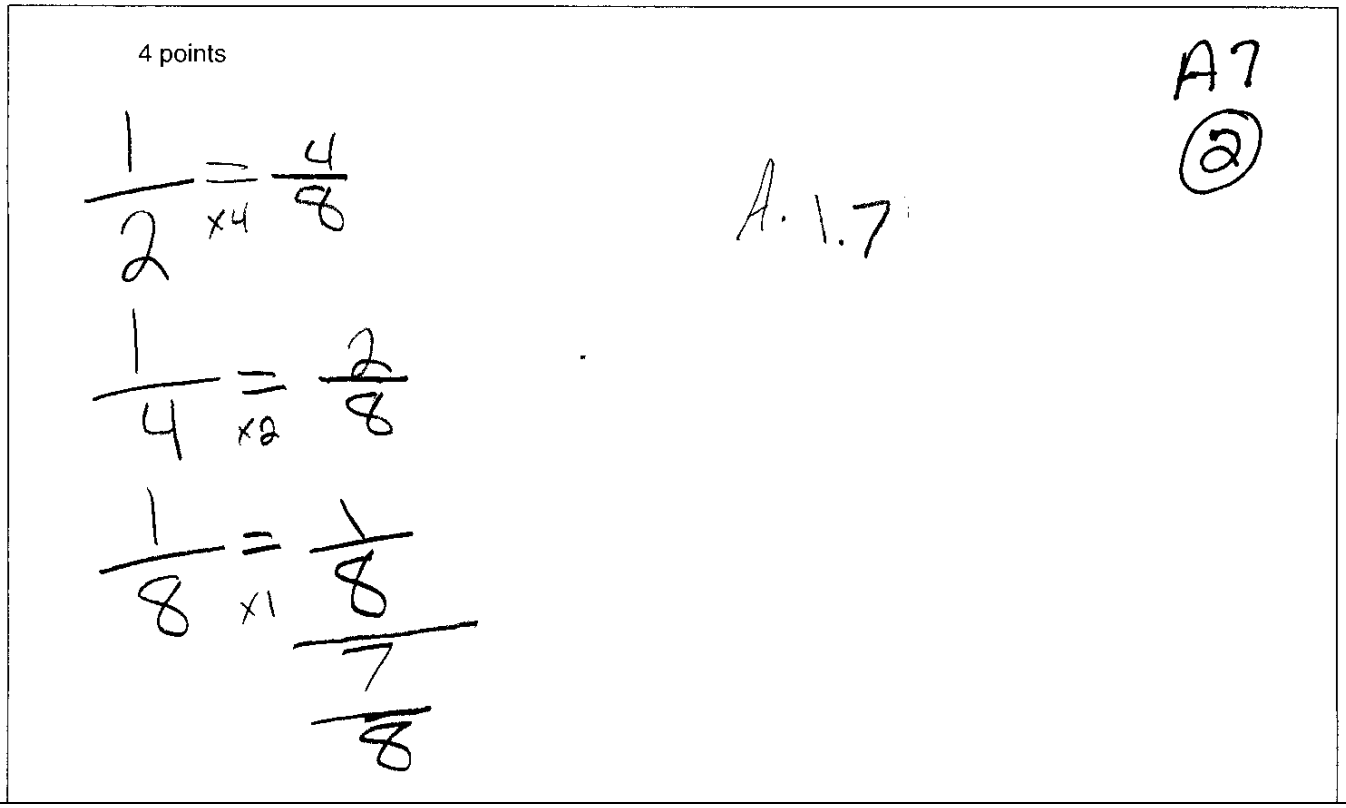
Sample Paper 6
Score Point 3

The response demonstrates understanding of the task by providing a correct expression and weight.

- The response has a correctly constructed mathematical expression (*1/2 + 1/4 + 1/8*). **(2 points)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response does not include a unit of measurement for the total weight of nuts. **(0 points)**

The response earns **3 points.**

Sample Paper 7 – Score Point 2



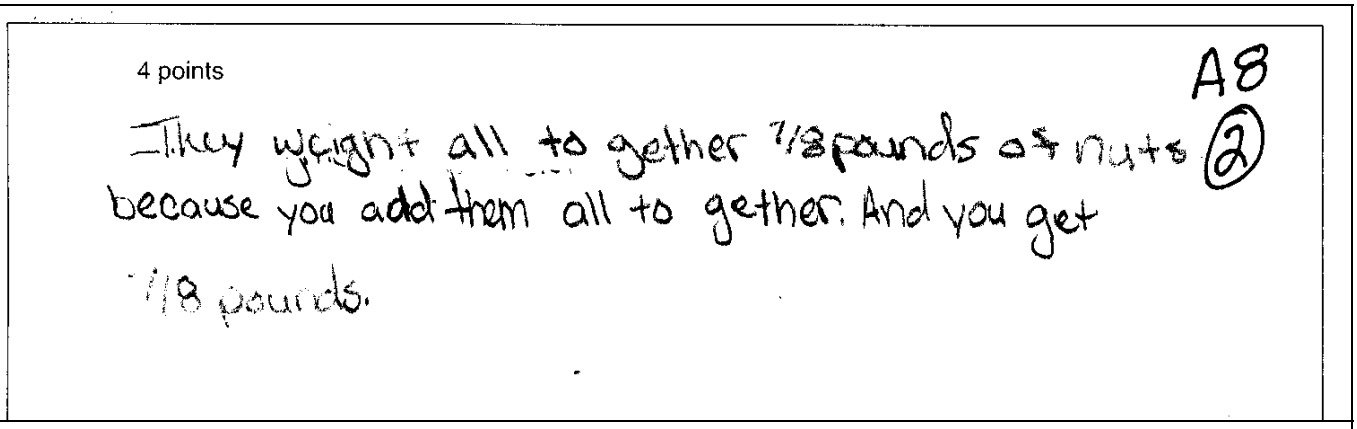
Sample Paper 7
Score Point 2

The response demonstrates partial understanding of the task by providing a partially correct expression and weight.

- The response has a partially correct mathematical expression using the given fractions correctly changed to fractions with the common denominator of 8 (*4/8, 2/8, 1/8*). The expression, written vertically, does not have a plus sign and is therefore partially correct. **(1 point)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response does not include a unit of measurement for the total weight of nuts. **(0 points)**

The response earns **2 points.**

Sample Paper 8 – Score Point 2



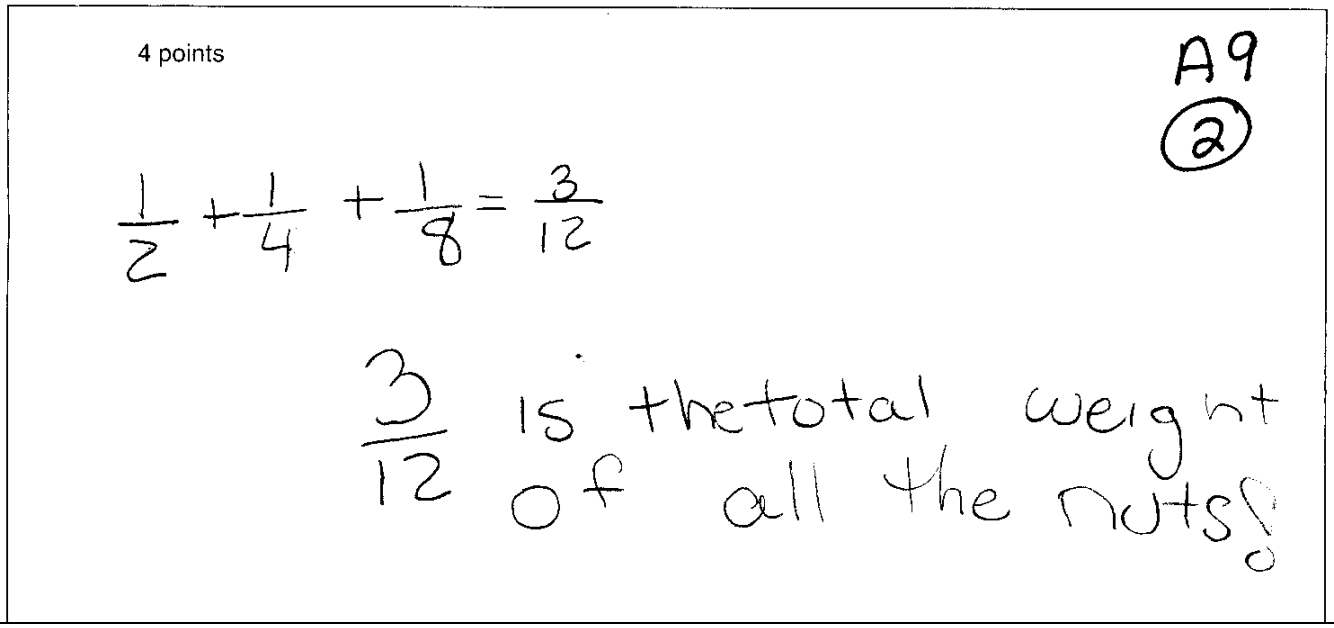
Sample Paper 8
Score Point 2

The response demonstrates partial understanding of the task by providing a correct weight and label.

- The response has no mathematical expression. **(0 points)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response has the correct unit of weight (*pounds*). **(1 point)**

The response earns **2 points.**

Sample Paper 9 – Score Point 2



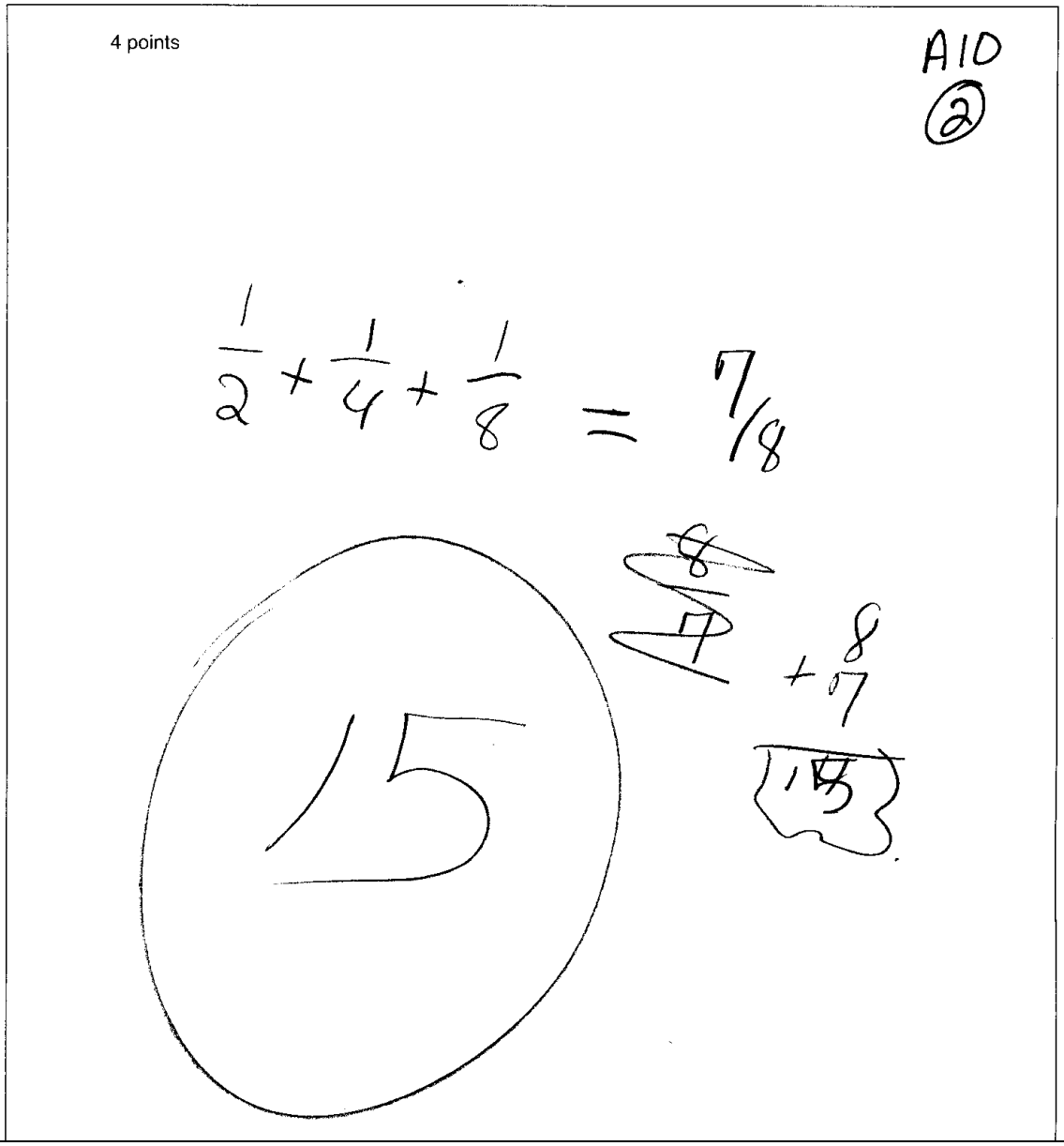
Sample Paper 9
Score Point 2

The response demonstrates partial understanding of the task by providing a correct expression.

- The response has a correctly constructed mathematical expression (*1/2 + 1/4 + 1/8*). **(2 points)**
- The response does not have the correct weight of the mixed nuts. **(0 points)**
- The response does not include a unit of weight. **(0 points)**

The response earns **2 points.**

Sample Paper 10 – Score Point 2



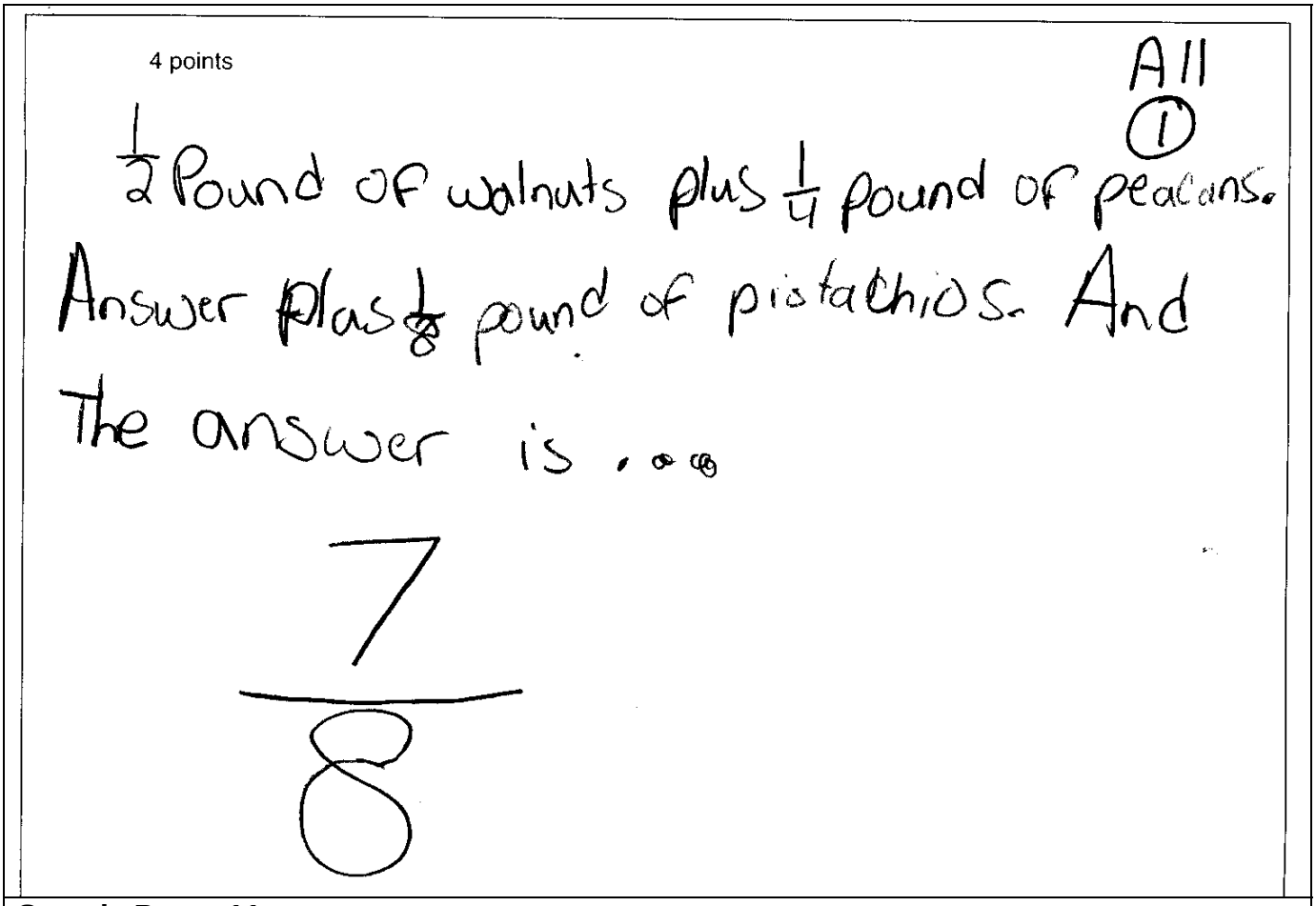
Sample Paper 10
Score Point 2

The response demonstrates partial understanding of the task by providing a correct expression.

- The response has a correctly constructed mathematical expression (*1/2 + 1/4 + 1/8*). **(2 points)**
- The response has the correct weight (*7/8*), but then adds *8 + 7* and circles the answer of *15*. When two conflicting answers are given, the response is considered incorrect. **(0 points)**
- The response does not include a unit of weight. **(0 points)**

The response earns **2 points.**

Sample Paper 11 – Score Point 1



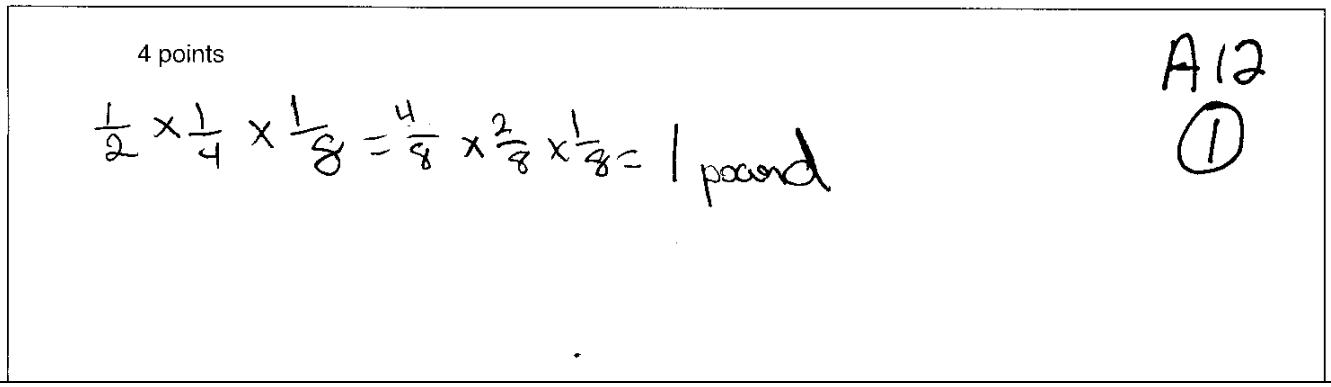
Sample Paper 11
Score Point 1

The response demonstrates some understanding of the task by providing a correct weight.

- The response has no correct mathematical expression. The process used to determine the correct weight is explained in the verbal explanation, but it is not written as a mathematical expression. **(0 points)**
- The response has the correct weight of the mixed nuts (*7/8*). **(1 point)**
- The response does not include a unit of weight in the answer. The *pound* unit of weight in the response is not associated with the total weight of the nuts.**(0 points)**

The response earns 1 point.

Sample Paper 12 – Score Point 1



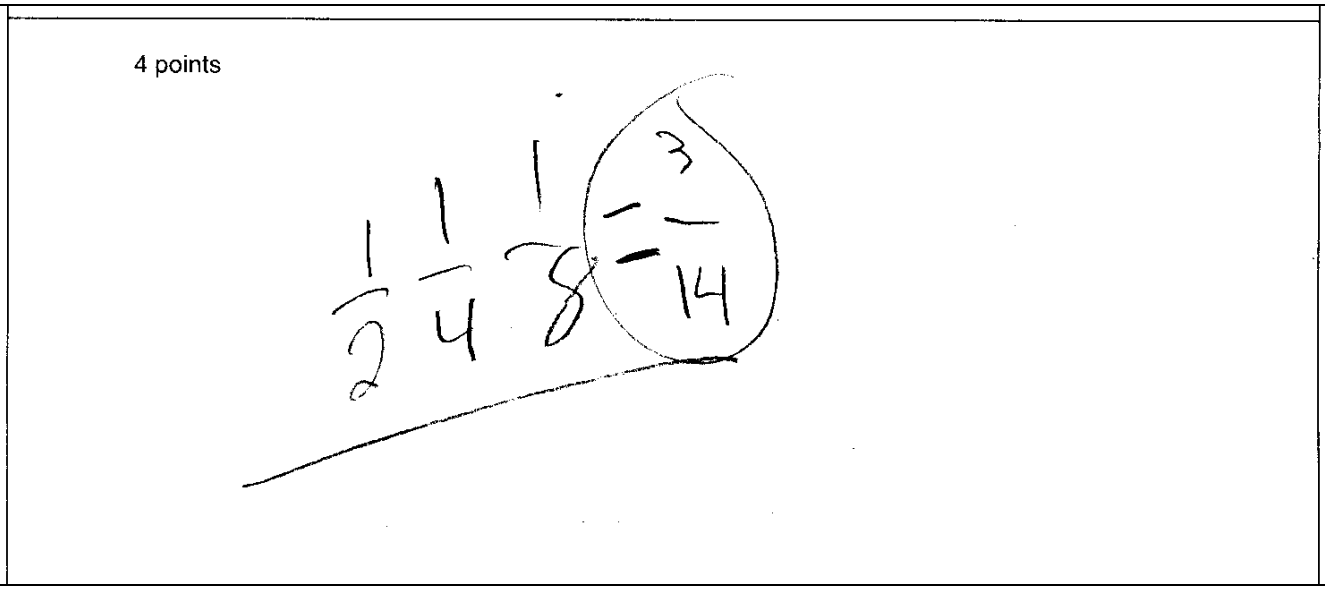
Sample Paper 12
Score Point 1

The response demonstrates some understanding of the task by providing a correct label.

- The response has no correct mathematical expression. The use of multiplication signs in the expression makes it incorrect. **(0 points)**
- The response has an incorrect weight of the mixed nuts *(1 pound)*. **(0 points)**
- The response has the correct unit of weight in the answer *(pound)*. **(1 point)**

The response earns **1 point.**

Sample Paper 13 – Score Point 1



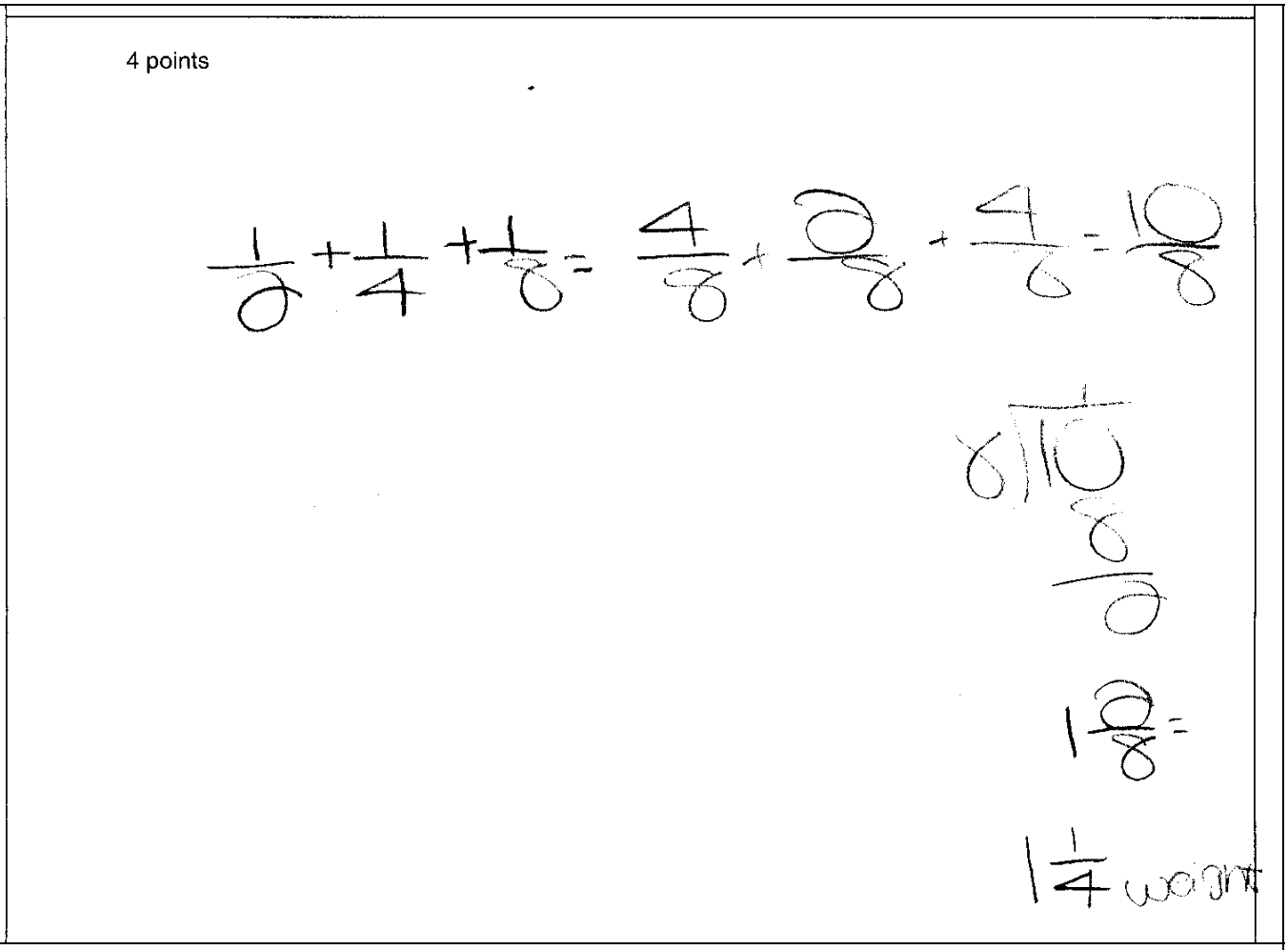
Sample Paper 13
Score Point 1

The response demonstrates some understanding of the item being tested by providing a partially correct expression.

- The response has a partially correct mathematical expression. The expression has the correct fractions and an equal sign followed by an incorrect answer. The addition signs are missing between the fractions. The numbers written like this earn partial expression credit. **(1 point)**
- The response has an incorrect weight of the mixed nuts *(3/14)*. **(0 points)**
- The response does not include a unit of weight in the answer. **(0 points)**

The response earns **1 point.**

Sample Paper 14 – Score Point 1



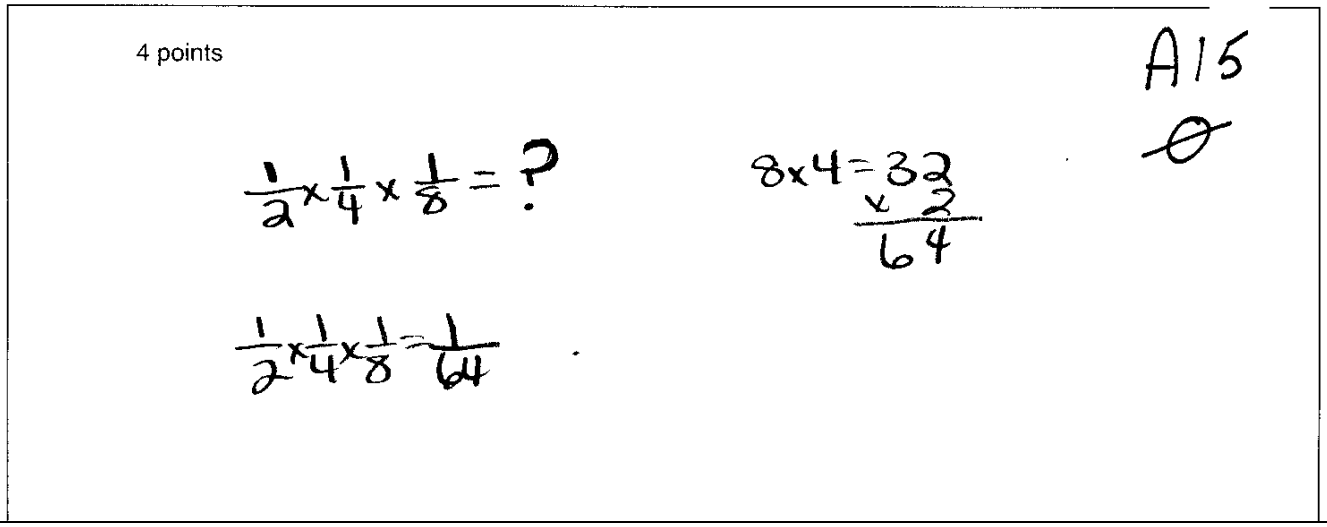
Sample Paper 14
Score Point 1

The response demonstrates some understanding of the item being tested by providing a partially correct expression.

- The response has a partially correct mathematical expression. It uses the given fractions, in the format of a correct expression, as the first part of a run-on equation. Therefore, the expression receives partial credit. **(1 point)**
- The response has an incorrect weight of the mixed nuts (*1¼ weight*). **(0 points)**
- The response does not include a unit of weight in the answer. **(0 points)**

The response earns **1 point.**

Sample Paper 15 – Score Point 0



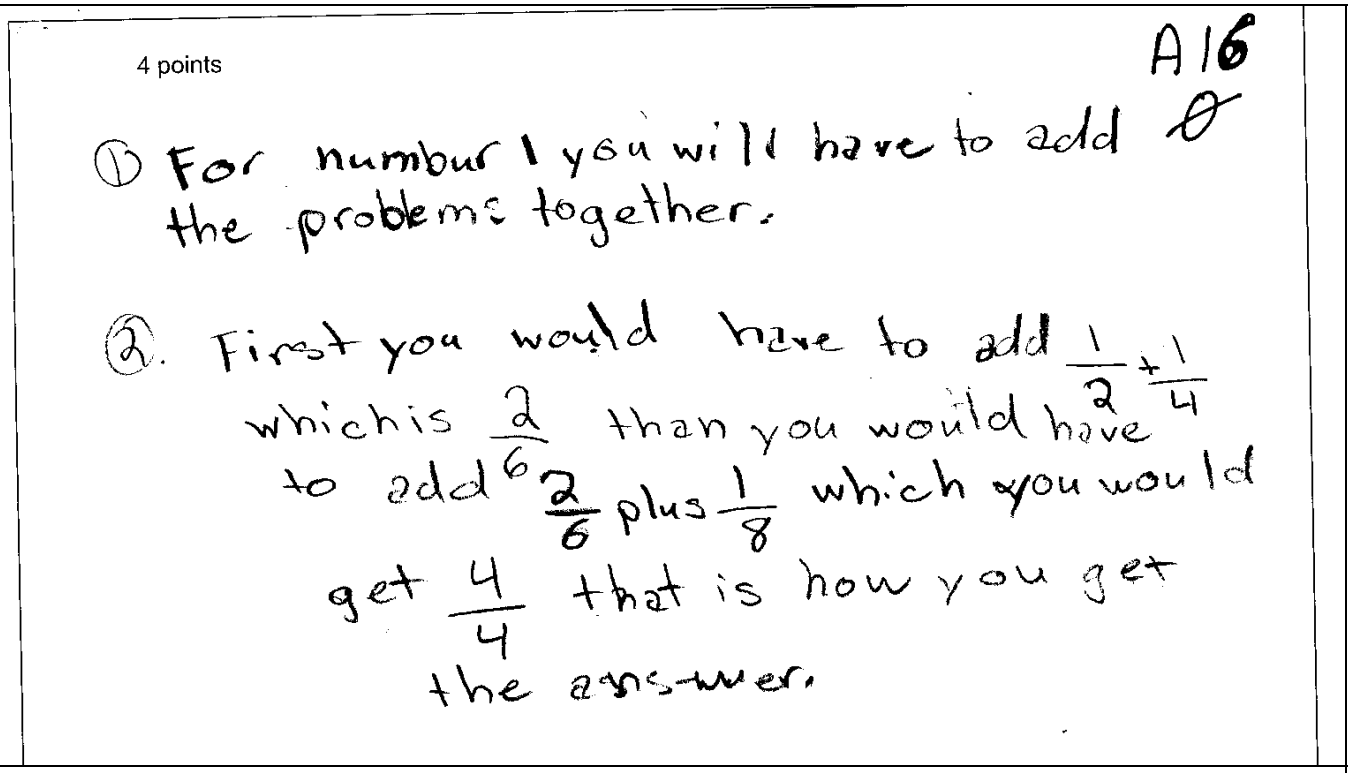
Sample Paper 15
Score Point 0

The response demonstrates insufficient understanding of the item being tested.

- The response has no correct mathematical expression. The expression written with multiplication signs is incorrect and receives no credit. **(0 points)**
- The response has an incorrect weight of the mixed nuts. **(0 points)**
- The response does not include a unit of weight in the answer. **(0 points)**

The response earns **0 points.**

Sample Paper 16 – Score Point 0



Sample Paper 16
Score Point 0

The response demonstrates insufficient understanding of the item being tested.

- The response has no correct mathematical expression. The process used to determine the correct weight is explained in the verbal explanation, but it is not written as a mathematical expression. **(0 points)**
- The response has an incorrect weight of the mixed nuts *(4/4)*. **(0 points)**
- The response does not include a unit of weight in the answer. **(0 points)**

The response earns **0 points.**